

## WHAT IS CLAIMED IS:

1. An optoreflective structure for reflecting an optical signal following a path defined by an optical waveguide comprising a first cladding layer having a first planar cladding surface; a waveguide disposed on said first cladding layer; a second cladding layer disposed on said waveguide and having a second planar cladding surface; said first cladding layer, said second cladding layer and said waveguide terminating in a beveled planar surface; and an optoreflector disposed on said beveled planar surface for changing a direction of an optical signal passing through the waveguide.
2. An optoreflective structure for reflecting an optical signal following a path defined by an optical waveguide comprising a first cladding layer having a first planar cladding surface; a waveguide disposed on said first cladding layer; a second cladding layer disposed on said waveguide and having a second planar cladding surface; said first cladding layer, said second cladding layer and said waveguide terminating in a generally dove-tailed structure having a beveled planar surface; and an optoreflector disposed on said beveled planar surface for changing a direction of an optical signal passing through the waveguide.
3. A method for producing an optoreflective structure comprising:
  - providing a substrate supporting a first cladding layer having a first planar cladding surface;
  - disposing a waveguide material on said first cladding layer;
  - forming on said waveguide material a second cladding layer having a second planar cladding surface;
  - forming a beveled planar surface in said first cladding layer, in said waveguide material, and in said second cladding layer; and
  - depositing an optical signal-changing surface on said beveled planar surface.
4. A method for producing an optoreflective structure comprising:
  - providing a substrate supporting a first cladding layer having a first planar cladding surface;
  - disposing a waveguide material on said first cladding layer;

forming on said waveguide material a second cladding layer having a second planar cladding surface;

forming in said first cladding layer, in said waveguide material, and in said second cladding layer a generally dove-tailed structure having a beveled planar surface;

5 and

depositing an optical signal changing surface on said beveled planar surface.

5. A method for producing an optoreflective structure comprising:

forming a first waveguide layer;

10 forming a first waveguide column in communication with said first waveguide layer;

forming a second waveguide column in communication with said first waveguide layer; and

forming a second waveguide layer in communication with said first waveguide column and with said second waveguide column.

15 6. An optoreflective structure for reflecting optical signals comprising a first waveguide layer; a second waveguide layer supporting said first waveguide layer and generally parallel thereto; a first waveguide column communicating with said second waveguide layer and passing through said first waveguide layer.